Scientific and Technical Information Center

Requester's Full Name:		Examiner # :	Date:
Art Unit: Phone	Number 50	Schai Number.	
Mail Bes and Bldg/Room Location	n Res	ults Format Preferred (circle):	PAPER DISK E-MAIL
If more than one search is subr	nitted, please prioriti	ze searches in order of ne	ed. ***********
Please provide a detailed statement of the Include the elected species or structures, utility of the invention. Define any term known, Please attach a copy of the cover	e search topic, and describe keywords, synonyms, acro s that may have a special m	as specifically as possible the subj nyms, and registry numbers, and co caning. Give examples or relevant	ect matter to be searched. ombine with the concept or
Title of invention:			
Inventors (please provide full names):			
Earliest Priority Filing Date:			
For Sequence Searches Only Please inch	ude all pertinent information	(parent, child, divisional, or issued pa	etent numbers) along with the
appropriete serial number.			
			``
			į
•			
		•	
	4.		
********	ند د د د د د د د د د د د د د د د د د د	***********	· · · · · · · · · · · · · · · · · · ·
STAFF USE ONLY	Type of Search	Vendors and cost whe	re applicable
corcher	NA Sequence (#)	STN	
carcher Photos	· AA Sequence (#)	Dialog	and the second s
earcher Location:	Structure (#)	Questel/Orbit	
tale Searcher Micked Up	Bibbographic	Dr.Link	·
acte Compilered [18]05	Litigation	Lexis/Nexis	
earther Proj. Review Time	Fullest	Sequence Systems	
Perical Prepione: 10	Patent Family	WW W/interne;	
white Time: +15	Other	Other (specify)	

FTO-1590 (8-01)



STIC Search Report Biotech-Chem Library

STIC Database Tracking Number: 141839

TO: Ilia Ouspenski Location: 3d74/3c70

Saturday, January 08, 2005

Art Unit: 1644 Phone: 272-2920

Serial Number: 10 / 008264

From: Jan Delaval

Location: Biotech-Chem Library

Rem 1a51

Phone: 272-2504

jan.delaval@uspto.gov

Search Notes	



8	KQGRRMFPFLSFTVAGLEPTSHYRMFVDVVLVDQHHWRYQSGKWVQCGKAEGSMPGNR	/
UB	aderrgggslgspypggalvpappsrflgayatprgklrvalnnhllmskfnghgtemtit Opgegyaaddpraglypgpredyalpaglevsgklrvalnnhllmskfnghgtemtit	/
2	/translation="MGIVEPGCGDMLTGTEPMPGSDEGRAPGADPQHRYFYPEPGAQD	
8	/db xref="gI:6002605"	
D D	/product="transcription factor TBLYM"	1
Ş	<pre>/note="T-box transcription factor family member" /codon start=1</pre>	
טט		CDS
	/ger	90110
8	.	Gen.
망	/db_xret="taxon:9606" /chromosome="17"	
S	/mol type="mRNA"	
מט		source
2 5	ocation/Qualifiers	FEATURES
?	Submitted (17-SEP-1998) Molecular Immunog	JOURNAL
닭	S Yang, S. Direct Submission	TITLE
S		REFERENCE
문		MEDLINE
Ş	family (2000)	TOTAL TOTAL
5	Zhang, W.X. Cloning and	TITLE
? !	1 (bases 1 to 2589)	REFERENCE
\$		
дъ	Homo sapiens	ORGANISM
Ş		KEYWORDS
뮻	AF093098 AF093098.1 GI:6002604	ACCESSION VERSION
S		LOCUS
₽ ₽		RESULT 7 AF093098
Ş		
בט	1772 TTTGATAAGGAAGCTGAAGGACAGTTTTATAACTATTTTCCCAACTGA 1819	dd
? 5	1561 TTTGATAAGGAAGGACAGTTTTATAACTATTTTCCCAACTGA 1608	Q
? !	1712 CGCGTGTCCCCCTATCCTTCCAGTGGTGACAGCTCCTCCCCTGCTGGGGCCCCTTCTCCT 1771	da
당 .	1501 CGCGTGTCCCCCTATCCTTCCAGTGGTGACAGCTCCTCCCTTGCTGGGGCCCCTTCTCCT 1560	δ.
₹	1652 GCCCCATCCGGCCGGAATCCAGTGATTCAGGACTGGGCGAAGGAGACTCTAAGAGGAGG 1711	ф
₽ \$	1441 GCCCCCATCCGGCCGGAATCCAGTGATTCAGGACTGGGCGAAGGAGACTCTAAGAGGAGG 1500	Q.
§ {	1592 GGAGGCTCAGAGGGACCGGGGACCAGAGGACCAGGGTCCCCCCTTGGTGTGGACTGAGATT 1651	ממ
₽ \$	1381 GGAGGCTCAGAGGGACGAGGACCAGAGGACCAGGGTCCCCCCTTGGTGTGAGATT 1440	Ş
3	1532 AAGATGGGCCCGGCCCAGCTGGCCCTATGCGGACTCTGCCCATGGAACCCCGGCCCT 1591	ממ
Me st	1321 AAGATGGGCCCGGCCAGCTGGTTCCGCCCCTATGCGGACTCTGCCCATGGAACCCCGGCCCT 1380	Ş
2	1472 CGAGGCCAGGAGGTCCTGGCAGCTGGAGCTGGCTGGCCAGTACCCTCCC 1531	מם
ORIGIN	1261 CGAGGCCAGGAGGTCCTGGCACCTGGAGCTGGCCTGTGGCACCCCAGTACCCTCCC 1320	Ą
	1412 GCAGTCAGCATGAAGCCTGCATTCTTGCCCCCTCTGCCCCCTGGGCCCATGTCCTACTAC 1471	Db
	1201 GCAGTCAGCATGAAGCCTGCATTCTTGCCCTCTGCCCCCTGGGCCCACCATGTCCTACTAC 1260	Q

LYVHPDSPNTGAHMMRQEVSFGKLKLTNNKGASNNVTQMIVLQSLHKYQPRLHIVEVN
DGBEBLACNASNTHIFTPQETGPIAVTAYQNABITQLKIDNNEPAKGFRENFESMYTS.
VDTSIPSPBGNCQFLGGDHYSPLLPNQYFVBFRYFDLGQAKUVVPQAYMLGAFPR
HSYERAFRAVGMKPAFLJSAPGFTMSYYRGQBVLAFGAGMFVAFQYFPYMGASWFRP
MRTLPMEPGPGGSEGRGPEDQGPPLVMTEIAFIRPESSDSGLGEGDSKRRRVSFYFSG
GDSSSPAGAPSFFDKEAEGQFYNYFPN"

Similarity

100.0%;

Length

2589;

ery Match st Local Simi tches 1608; 1052 481 632 421 572 361 512 301 452 241 392 181 332 121 272 212 841 992 781 932 872 661 812 601 752 541 692 721 19 • CCGCGTGAGGACTACGCGCTACCCGCGGGACTGGAGGTGTCGGGGGAAACTGAGGGTCGCG GGCGCCTTGGTGCCCCCCCCCCCCGAGCCGCTTCCTTTGGAGCCTACGCCTACCCCGCCGA GGCGCGAGGACGCGGACGAGCGTCGCGGGGGGCGCAGCCTGGGGTCTCCCCTACCCGGGG AGCGACGAGGGCCGGCGGCGCGACCCGCAGCACCGCTACTTCTACCCGGAGCCG AGCGACGAGGGCCGGGCGCCGGAGCCCGCAGCACCGCTACTTCTACCCCGGAGCCG ATGGGCATCGTGGAGGCCGGGTTGCGGAGACATGCTGACGGGCACCGATGCCGGGG ATGGGCATCGTGGAGCCGGGTTGCGGAGACATGCTGACGGGCACCGAGCCGATGCCGGGG AGCGCAAGTGGGTGCAGTGTGGAAAGGCCGAGGGCAGCATGCCAGGAAACCGCCTGTAC AGCCACTACAGGATGTTTGTGGACGTGGTCTTGGTGGACCAGCACCACTGGCGGTACCAG AAGCAGGAACGGCGGATGTTCCCCATTCCTGTCATTTACTGTGGCCCGGGCTGGAGCCCACC GGCTACCAGCCGGGCGAGGGCTACGCCGCCCCGGACCCGCGCGCCGGGGCTCTACCCGGGG CCCCAGGCGGCCGGCTTCCCCGGCGCGGGCGAGTCCTTCCCGGCCGCGCGGACGCCGAG GGCGCGCAGGACGCGACGAGCGTCGCGGGGGGCAGCCTGGGGTCTCCCTACCCGGGG GAGGCAGCCTGCAACGCTTCCAACACGCATATCTTTACTTTCCAAGAAACCCAGTTCATT CAGTCCCTCCATAAGTACCAGCCCCGGCTGCATATCGTTGAGGTGAACGACGACGACGAGGGCCA AAACTAAAGCTCACAAACAACAAGGGGGCGTCCAACAATGTGACCCCAGATGATTGTGCTC GTCCACCCGGACTCCCCCAACACAGGAGCGCACTGGATGCGCCAGGAAGTTTCATTTGGG GTCCACCCGGACTCCCCCAACACAGGAGGCGCACTGGATGCGCCAGGAAGTTTCATTTGGG AGCCACTACAGGATGTTTGTGGACGTGGTCTTGGTGGACCAGCACCACTGGCGGTACCAG CCGCGTGAGGACTACGCGCTACCCGCGGGACTGGAGGTGTCGGGGAAACTGAGGGTCGCG GCCGTGACTGCCTACCAGAATGCCGAGATTACTCAGCTGAAAATTGATAATAACCCCCTTT AMACTAMAGETEACAMACAMEMAGGGGGCGTCCAMCAMTGTGACCCAGATGATTGTGCTC AGCGGCAAGTGGGTGCAGTGTGGAAAAGGCCGAGGGCATGCCAGGAAAACCGCCTGTAC AAGCAGGGACGGGATGTTCCCATTCCTGTCATTTACTGTGGCCGGGCTGGAGCCCACC CAGTCCCTCCATAAGTACCAGCCCCGGCTGCATATCGTTGAGGTGAACGACGGAGAGCCA Conservative 0 Score 1608; DB 9; Pred. No. 8.3e-252; Mismatches 0; Indels 0 Gaps 271 360 300 240 180 331 120 9 1051 840 571 480 631 420 511 451 391 960 900 991 780 931 720 871 660 811 600 751 540 691 0

CDS	3	nos REATURES		AUTHORS TITLE	RBFBRENC	SOURCE ORGANI	VERSION KEYWORDS	ACCESSION ACCESSION	AX055556 LOCUS		맑	Ş	Ъ	Ą	뮍	ş	Db	ş	8	ধ	당 :	8	웅 &	? 5	. <i>Q</i>	g	Ş	₽ \$? 5	হ হ	망
11593 /note="unnamed protein product" /codon_start=1 /protein_id="CAC22099.1"	/db/	rce	PRESIDENT AND FELLOWS OF HARVARD COLLEGE (US)			Mus musculus (house mouse) Mus musculus Chouse mouse)	AX055556.1 G	Sequence 3 from Patent WO0073453. AX055556	AX055556		1772 TTTGATAAGGAAGCTGAAGGACAGTTTTATAACTATTTTCCCAACTGA 1819	1561 TITGATAAGGAAGCIGAAGGACAGTITTATAACTATTTTCCCAACTGA 1608	1712 CGCGTGTCCCCCTATCCTTCCAGTGGTGACAGCTCCTCCCCTGCTGGGGGCCCCTTCTCCT 1771	1501 GGCGTGTCCCCCTATCCTTCCAGTGGTGACAGCTCCTCCCCTGCGGGGCCCCTTCTCTCT 1560	1652 GCCCCATCCGGCCGGAATCCAGTGATTCAGGACTGGGCGAAGGAGACTCTAAGAGGAGG 1711	1441 GCCCCCATCCGGCCGGAATCCAGTGATTCAGGACTGGGCGAAGGAAG	1592 GGAGGCTCAGAGGGACCAGAGGACCAGGGTCCCCCCTTGGTGTGGACTGAGATT 1651	1381 GGAGGCTCAGAGGGACGAGGACCAGAGGACCCAGGGTCCCCCCTTGGTGTGGACTGAGATT 1440	1532 AAGATGGGCCCGGCCAGCTGGTTCCGCCCTATGCGGACTCTGCCCATGGAACCCGGCCCT 1591	AGATGGGCCCGGCCAGCTGGTTCCGCCCTATGCGGACTCTGCCCATGGAACCCGGCCCT	CGAGGCCAGGAGGTCCTGGCACCTGGAGCTGGCTGTGGCACCCCAGTACCCTCCC	CGAGGCCAGGAGGTCCTGGCACCTGGAGCTGGCTGGCCTGTGGCACCCCAGTACCCTCCC	1201 GUARTICAGGATGAAGGCTIGGATTCTTGCCCTTTGCCCCTGGGCCCAGGATGTCCTACTAC 1260	GTTCCCCAGGCTTACTGGGGGGGGGGGGGGGGGGGGGGG	GTTCCCCAGGCTTACTGGCTGGGGGCCCCCCGGGACCACAGCTATGAGGCTGAGTTTCGA	1292 AACCAGTATCCTGTTCCCAGCCGCTTCTACCCCGACCTTCCTGGCCAGGCGAAGGATGTG 1351	1081 AACCAGTATCCTGTTCCCAGCCGCTTCTACCCCGACCTTCCTGGCCAGGCGAAGGATGTG 1140	1021 TCCCGCCTGGACCCAACTGTCAATTCCTTGGGGGAGATCACTACTCTCCTCCTTCCT	GCCAAAGGATTCCGGGAAGACTTTGAGTCCATGTACACATCTGTTGACACCAGCATCCCC	GCCAAAGGATTCCGGGAGAACTTTGAGTCCATGTACACATCTGTTGACACCAGCATCCCC	1112 GCCGTGACTGCCTACCAGAATGCCGAGATTACTCAGCTGAAAATTGATAATAACCCCTTT 1171
D &		g,	Db		문 동			Db	ğ	Db	Ş	Db	φ γ	р В	Ŋ	Db .	Ş,		8			문 5	Ş 5	: · §	Matches	Query Mai	ORIGIN				
781 CAGICCCICCA 778 CAGICICICCA		721 AAACTAAAGCT	658 GTCCACCCAGA				541 AGCCACTACAG	478 AAGCAAGGACG	481 AAGCAGGGACG	418 CTCAGCAACCA	421 CTCAACAACCA	358 CCGCGCGAGGA	361 CCGCGTGAGGA	298 GGCTACCCGCC	301 GGCTACCAGCC	238 GCTCAGGTGGC	241 ccccaeecec	178 GGCGCCTGGT	181 GGCGCCTTGGT				1 ATGGGCATCGTG		1378; Conserv	Query Match Best Local Similarity	FAG	DTSVI SYBAI RTLPI	GEPI	PVIX	/trai

/db xref="GI:12228776"
/translation="MGIVEPCCGDMLTGTEPMPSDEGRGPGADQQHRFFYPEPGAQDP
/transslation="MGIVEPCCGDMLTGTEPMPSDEGRGPGADQQHRFFYPEPGAQDP
/transslation="MGIVEPCCGDMLTGTEPMPSDEGRGPGADQQHRFFYPEPGAGAEGYP
pVDGYPADDPRAGLYPGFREDYALPACLEVGSCHLVALASHLLMSKFNQHQTEMIITK
QGRRMFPPLSFTVAGLEPTSHYRMFVDVVLVDQHHWRYQSGKMVQCGKAEGSMPGURL
YVHPDSPMTGAHMWRQEVSFCKLKLTMNKGASNNVTQNUTVLQSLHKYQPRLHIVEVUD
GEPEAACSASNTHVFTFQETQFIAVTAYQNASITQLKIDNNPFAKGFRENFESMYASV
DTSVVBSPGNYGLLGGDFFSFLLSNQYPVFXGAEYPDLGGQFKMJSQPYMLGTPREH
SYEBAFRAYGMKFFILLPSAPGBTVFYYRGDVLAPGAGMPVAPQYPKMSBAGMFRRM
RTLPMDPGLGSSEGQGSSPSLMPEVTSLQPEPSDSGLGEGDTKRRRISPYPSSGDSSS
PAGAPSPPDKETEGQFYNYFPN"

75.5%; Score 1214; DB 6; 85.7%; Pred. No. 1e-187; rative 0; Mismatches 215; CACCAACAACAAGGGGGCTTCCAACAATGTGACCCAGATGATCGTCCTG CACAAACAACAAGGGGGCGTCCAACAATGTGACCCAGATGATTGTGCTC GOTTOCAGTOTOGAAAGGCCGAGGGCAGGAAACCGCCTGTAC 3GATGTTTGTGGACGTGGTCTTGGTGGACCAGCACCACTGGCGGTACCAG GCGGATGTTCCCATTCCTGTCATTTACTGTGGCCGGGCTGGAGCCCACC 540 CCTGTTGTGGTCCAAGTTTAATCAGCACCAGACAGAGATGATCATCACC CGGGCGAGGGCTACGCCGCCCCGGACCCCGCGCGCCCGGGCTCTACCCCGGGG receneceeceeerceenreceneearcenreeceaeceraceeceee rgcccgcccgccgagccgcttccttggagcctacgcctacccgcgcga ACCCGACCGATCGCCGCGCAGGTAGCAGCCTGGGGACGCCCTACTCTGGG CONTRACTOR OF THE CONTRACTOR O reda ecceser Trecesa e a recesa es en esta en e .crccccaacaccegaecccacregarececcaegaaerrrcarrrege CTCCCCCAACACAGGAGCGCACTGGATGCGCCAGGAAGTTTCATTTGGG CCTGTTGTGGTCCAAGTTCAACCAGCACCAGACAGAGATGATCATCACT CTACGCGCTACCCGCGGACTGGAGGTGTCGGGGGAAACTGAGGGTCGCG CGTGGATGGCTACCCTGCCCCTGACCCGCGCGCGCGGGCTCTACCCAGGG TGGCTTTCCCGGGCCTGGCGAGTTCTTCCCGCCGCCGCGGGGTGCGGAG iccedesecccesascesaccaacascarcerrrcrrcrarcccasecce GATGTTTGTGGATGTGGTCTTGGTGGACCAGCACCACTGGCGGTACCAG CTACGCATTGCCCGCGGGGTTGGAGGTGTCTGGGAAGCTGAGAGTCGCG **GCGAATGTTCCCATTCCTGTCCTTCACCGTGGCCGGGCTGGAGCCCACA** 215; Length 1593; Indels 15; Gaps ရ် 780 717 657 660 537 480 360 237 777 597 600 477 417 420 300 240 177 180 117 120 57 60 720 357 297 22

ATAAGTACCAGCCCCGGCTGCATATCGTTGAGGTGAACGACGACGGAGAGCCA

840

837

CAAGTACCAGCCCCGGCTGCACATCGTGGAGGTGAATGATGGAGAGCCA

```
Title:
Perfect score:
                                                                                               Scoring table:
                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                           Run on:
                                                                                                                                                                                                                                                                                                    OM protein -
Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                protein search, using sw model
                                                                                                                                                                                                                 January 6, 2005, 06:07:23; Search time 196 Seconds (without alignments)
1570.538 Million cell updates/sec
                                                                                                   BLOSUM62
                                     1825181 seqs, 575374646 residues
                                                                                                                                                             US-10-008-264A-2
2942
                                                                            Gapop 10.0 , Gapext 0.5
                                                                                                                                      1 MGIVEPGCGDMLTGTEPMPG......GAPSPFDKEAEGQFYNYFPN 535
                                                                                                                                                                                                                                                                                                                                                            Copyright
                                                                                                                                                                                                                                                                                                                                                          GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.
1825181
```

Maximum Minimum 댎댎 seq length: seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

UniProt_02:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

33222222222222222222222222222222222222	 4004	Result
943.5 945.5	2942 2570.5 2565.5 2565.5	Score
33 0 0 32 1 1 3 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1	100.0 87.4 87.2 39.9	Query Match
974545456933344545669333445456693334456693334456693334456693334456693334456693334456693344566933445669334456693446693466934666934666934666934666934666934666934666934666934666934666934666934666934666934666936669366695666976669566	535 530 530 223	Length I
	2001	BB
Q9PVX6 Q8BNZ2 Q8BNZ2 EOMD_MCUSE Q9JJL1 Q98TUZ AAH67719 EOMD HUMAN TER1_MCUSE Q7TSY9 AAH5839 TER1_HUMAN Q966R5 Q9DDU4 Q96R4 Q9GR4 Q9GR4 Q9GR4 Q9GR4 Q9GRA0 TEX4_CANFA TEX4_CANFA TEX4_CANFA TEX4_CANFA TEX4_MCUSE CMB_DROME	TX21_HUMAN Q9ROA6 Q9JKD8 Q9JKD8 Q8OX15	ID
4 4	Q9úll7 homo Q9r0a6 mus n Q9jkd8 mus n Q80x15 peron	Description
cynops pyrr mus musculu xenopus lae mus musculu mus musculu brachydanio brachydanio brachydanio brachydanio brachydanio brachydanio brachydanio brachydanio brachydanio brachdiosto brachydanio brachy	homo sapien mus musculu mus musculu peromyscus	ä

SEQUENCE FROM N.A. TISSUE-Testis;

MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

commitment."; Cell 100:655-669(2000).

RA Strausberg R.L., Feingold B.A., Grouse L.H., Derge J.G.,
RA Klausmer R.D., Collins P.S., Wagner L., Shemmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Frange C.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Frange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Raha S.S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Whitling M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J.W., Green B.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.,
"Generation and initial analysis of more than 15,000 full-length human and mouse cDMA sequences ""
"Generation and initial analysis of more than 15,000 full-length human and mouse cDMA sequences ""
"C -- FUNCTION: Transcription factor that controls the expression of the

FUNCTION: Transcription factor that controls the expression of the TH1 cytokine, interferon-gamma. Initiates TH1 lineage development from naive TH precursor cells both by activating TH1 genetic

GN Name=TBX21; Synonyms OS Homo saptens (Human) OC Bukaryota; Metazoa; OC Mammalia; Butheria; OX NCBI_TaxID=9606; RN [1] — SEQUENCE FROM N.A. RP SEQUENCE FROM S.A. RA "Cloning and charact RI "Cloning and charact RI "Cloning and N.A. RA SEDLINB=20223568; Pu RA Szabo S.J., Kim S.T. RA Szabo S.J., Kim S.T.	RESULT 1 TX21 HUMAN ID TX21 HUMAN AC QUILT; DT 16-OCT-2001 DT 16-OCT-2001 DT 05-UUL-2001 DT 05-UUL-2001 DT 05-UUL-2001 DT 05-UUL-2001	33333333333333333333333333333333333333
Name=TBX21; Synonyms=TBLYM, Homo sapiens (Human). Bukaryota, Metazoa; Chordat Mammalia; Butheria; Primate Mammalia; Butheria; Primate MCBI TaxID=9606; [1] TaxID=9606 N.A. SEQUENCE FROM N.A.	T 1 HUMAN TX21 HUMAN STANDARD; Q9ULT; 16-OCT-2001 (Rel. 40, Creat 16-OCT-2001 (Rel. 44, Last T-box transcription factor	118.00 11
g=TBLYM, T). Chordata; Primates; Prization to the B	NRD; Created) Last sec	47445575544556 474675756 474675756 4746757575757575757575757575757575757575
TBBT; a; Carariata; Vertebrata; s; Cararrhini; Hominidae; on of a new member of T-b EMBL/GenBank/DDBJ databa	ALIGNMENTS PRT; 535 AA. ted) sequence update) annotation update) TBX21 (7-box protein 21)	TBX6_HUMAN TBX4_MOUSE Q99P2 Q99MP0 Q93288 Q9W7C2 TBX2_HOMOSE TBX5_HUMAN BYN_DROME Q9IAK8 Q9PTK3 Q9PUS7 Q863A2 Q70HR6
Euteleos Homo.	(Transcription	095947 970325 099922 099922 093288 093288 099702 0699703 0995965 0991kk 0991kk 0991kk 0991kk
eostomi;	iption	homo sapien mus musculu mus musculu mus musculu mus musculu gallus gall xenopus lae mus musculu homo sapien drosophila brachydanio brachydanio brachydanio brachydanio brachydanio canis famil podocoryne

유

481

APIRPESSOSGLGEGDSKRRRVSPYPSSGDSSSPAGAPSPFDKEAEGQFYNYFPN

535

```
Query Match
Best Local S
Matches 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBI outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8888
$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS01283; TBOX 1; 1.
PROSITE; PS01264; TBOX 2; 1.
PROSITE; PS50252; TBOX 3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  programs and by repressing the opposing --- SUBCELLULAR LOCATION: Nuclear.
--- TISSUE SPECIFICITY: T-cell specific.
--- SIMILARITY: Contains 1 T-box domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GO; GO:0003700; F:transcription factor activit; GO; GO:0007275; P:development; TAS.
GO; GO:0006355; P:regulation of transcription, InterPro; IPR008967; P53 like DNA bnd.
InterPro; IPR001699; TF_T-box.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TRANSFAC; T04948; -.
Genew; HGNC:11599; TBX21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Activator,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PRO0937; TBOX. SMART; SM00425; TBOX; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam, PF00907; T-box; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AF093098;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GO:0005634; C:nucleus; NAS.
GO:0003700; F:transcription
GO:0007275; P:development;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        604895; -
481
                                            421
                                                                                 421
                                                                                                                                  361
                                                                                                                                                                            361
                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AF093098; AAF00055.1; -. AF241243; AAF61243.1; -. BC039739; AAH39739.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      535;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P24781;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GALVPAPPSRFLGAYAYPPRPQAAGFPGAGESFPPPADAEGYQPGEGYAAPDPRAGLYPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GALVPAPPSRFLGAYAYPPRPQAAGFPGAGESPPPPADAEGYQPGEGYAAPDPRAGLYPG
                                                                             RGQEVLAPGAGWPVAPQYPPKMGPAGWFRPMRTLPMEPGPGGSEGRGPEDQGPPLVWTEI
                                                                                                                                                                 NQYPVPSRPYPDLPGQAXDVVPQAYWLGAPRDHSYBABFRAVSMKPAFLPSAPGPTMSYY
                                                                                                                                                                                                                                                  AVTAYQNABITQLKIDNNPFAKGFRENFESMYTSVDTSIPSPPGPNCQFLGGDHYSPLLP
                                                                                                                                                                                                                                                                                                                                           KLKLTNNKGASNNVTQMIVLQSLHKYQPRLHIVEVNDGEPEAACNASNTHIFTFQETQFI
                                                                                                                                                                                                                                                                                                                                                                                                      SHYRMFVDVVLVDQHHWRYQSGKWVQCGKAEGSMPGNRLYVHPDSPNTGAHWMRQEVSFG
                                                                                                                                                                                                                                                                                                                                                                                                                                    SHYRMFVDVVLVDQHHWRYQSGKWVQCGKABGSMPGURLYVHPDSPUTGAHWMRQEVSFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MGI VEPGCGDMLTGTEPMPGSDEGRAPGADPQHRYPYPEPGAQDADERRGGGSLGSPYPG
APIRPESSDSGLGEGDSKRRRVSPYPSSGDSSSPAGAPSPFDKEAEGQFYNYFPN
                                                                                                                                                                                                                      AVTAYONABITOLKIDNNPFAKGFRENFESMYTSVDTSIPSPPGPNCQFLGGDHYSPLLP
                                                                                                                                                                                                                                                                                                             KLKLTNNKGASNNVTQMIVLQSLHKYQPRLHIVEVNDGEPEAACNASNTHIFTFQETQFI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PREDYAL PAGLEVSGKLRVALINHILLWSKFNQHQTEMIITKQGRRMFPFLSFTVAGLEPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PREDYALFAGLEVSGKLRVALINHILLWSKFNQHQTEMIITKQGRRMFPFLSFTVAGLEFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MGI VEPGCGDMLTGTEPMPGSDEGRAPGADPQHRYFYPEPGAQDADERRGGGSLG8PYPG
                                                                                                                                NOYPVPSRFYPDLPGQAKDVVPQAYWLGAPRDHSYEAEFRAVSMKPAFLPSAPGPTMSYY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA-binding; Nuclear protein; Transcription regulation 146 326 T-box.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          535 AA; 58328 MW; 51F351335598CBF2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1XBR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 2942; DB 1; 100.0%; Pred. No. 2.2e-158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       factor activity, TAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TH2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA-dependent;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   programs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 535;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gape
                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                    480
                                                                                                                                420
                                                                                                                                                                            420
                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

밁

S

밁

Ś

S 밁

S 유 Ś 밁 S 밁 ঠ 밁 S

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SORRER REPORTED TO THE PROPERTY OF THE PROPERT
                               8
                                                                                         밁
                                                                                                                                           δ
                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 466; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9ROA6 PRELIMINARY; PR
Q9ROA6; Q9ROA6; (TrEMBLrel. 13, Cres
01-MAY-2000 (TrEMBLrel. 13, Last
01-MAY-2004 (TrEMBLrel. 26, Last
17ranscription factor TBLYM.
Name-Tbx21; Synonyms-Tblym;
Mus musculus (Mouse).
Bukaryota; Metazoa; Chordata; Cr
Mammalia; Butheria; Rodentia; Sc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zhang, Wx, Yang S.Y.;
"Cloning and characterization of a family.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS01283; TBOX 1; 1.
PROSITE; PS01264; TBOX 2; 1.
PROSITE; PS50252; TBOX 3; 1.
SEQUENCE 530 AA; 57841 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PR00937; TBOX. SMART; SM00425; TBOX; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AF093099; AAF
HSSP; P24781; 1XBR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yang S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=BALB/c;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=BALB/c;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00907; T-box; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GO; GO:0048304; P:positive regulation of 30; GO:0050776; P:regulation of immune reinterPro; IPR008967; P53 lke DNA_bnd.
InterPro; IPR001699; TF_T-box.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genomics 70:41-48(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MGI:1888984, Tbx21
                                          301
                                                                                              240
                                                                                                                                           241
                                                                                                                                                                                             180
                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      μ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ed (SEP-1998) to the EMBL/GenBank/DDBJ
F093099; AAF00056.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                       GALVPAPPSRFLGAYAYPPRPQAAGFPGAGESFPPPADAEGYQPGEGYAAPDPRAGLYPG
                                            AVTAYONABITOLKIDNNPFAKGFRENFESMYTSVDTSIPSPPGPNCOFLGGDHYSPLLP
                                                                                                                         KLKLTNNKGASNNVTQMTVLQSLHKYQPRLHIVEVNDGEPBAACNASNTHIFTFQETQFI
                                                                                                                                                                                                                             SHYRMFVDVVLVDQHHWRYQSGKWVQCGKAEGSMPGNRLYVHPDSPNTGAHWMRQEVSFG
                                                                                                                                                                                                                                                                                                 PREDYAL PAGLEVSGKLRVALSNHLLWSKFNQHQTEMIITKQGRRMFPFLSFTVAGLEPT
                                                                                                                                                                                                                                                                                                                           PREDYALPAGLEVSGKLRVALANNHLLWSKFNQHQTEMIITKQGRRWFPFLSFTVAGLEFT
                                                                                                                                                                                                                                                                                                                                                                                                     GALVPAAPGRFLGSFAYPPRAQVAGFPGPGBFFPPPAGAEGYPPVDGYPAPDPRAGLYPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MGIVEPGCGDMLTGTEPMP-SDEGRGPGADQQHRFFYPEPGAQDPTDRRAGSSLGTPYSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MGIVEPGCGDMLTGTEPMPGSDEGRAPGADPQHRYFYPEPGAQDADERRGGGSLGSPYPG
AVTAYONABITOLKIDNNPPAKGFRENFESMYASVDTSVPSPPGPNCQLLGGDPFSPLLS
                                                                                                                                                                                             SHYRMFVDVVLVDQHHWRYQSGKWVQCGKAEGSMPGNRLYVHPDSPNTGAHWMRQEVSFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87.4%; Score 2570.5;
87.1%; Pred. No. 2.1e
:ive 24; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05AF84B6AA227FB8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       new
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of isotype response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       member
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .5; DB 2;
1.1e-137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              switching to.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       T-box
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            530;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          تا
د.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IMP
                                               360
                                                                                                                                                                                                                                                                                                                                                      180
359
                                                                                                                                                300
                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                    179
                                                                                                                                                                                                                                                                                                                                                                                                     119
                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         59
                                                                                              299
                                                                                                                                                                                                  239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ŋ
```